

WHAT IS CLAIMED IS:

1. An inhibitor of HIV replication, comprising a peptide or analog comprising a
5 decapeptide, said decapeptide containing (from the N-terminus to the C-terminus) a basic
amino acid in position 1, an acidic amino acid in positions 2 and 5, and a tryptophan in
positions 4, 7 and 8.
2. The inhibitor of claim 1, wherein said basic amino acid in position 1 is chosen from the
group consisting of lysine and arginine.
3. The inhibitor of claim 1, wherein said acidic amino acid in position 2 is glutamate.
- 10 4. The inhibitor of claim 1, wherein said acidic amino acid in position 5 is glutamate.
5. The inhibitor of claim 1, wherein the amino acid in position 3 is chosen from the group
consisting of threonine, isoleucine and valine.
6. The inhibitor of claim 1, wherein the amino acid in position 6 is chosen from the group
consisting of threonine, alanine and glutamine.
- 15 7. The inhibitor of claim 1, wherein the amino acid in position 9 is chosen from the group
consisting of threonine, alanine, valine, isoleucine, methionine, and aspartate.
8. The inhibitor of claim 1, wherein the amino acid in position 10 is chosen from the group
consisting of glutamate, aspartate and asparagine.
9. The inhibitor of claim 1, comprising a decapeptide containing (from the N-terminus to the
20 C-terminus) a basic amino acid in position 1, an acidic amino acid in positions 2 and 5,
and a tryptophan in positions 4, 7, and 8.
10. The inhibitor of claim 9, wherein said decapeptide is peptide p7 (SEQ ID N° 1) consisting
of residues 395-404 of the HIV-RT BH₁₀.
11. The inhibitor of claim 1, further comprising a vector allowing the penetration of the
25 peptide or analog into a mammalian cell.
12. The inhibitor of claim 11, wherein said vector comprises one or more from the group
consisting of liposomes, polymeric protein-binding cations, proteins, peptides, micro- or
nanoparticles.
13. The inhibitor of claim 11, wherein said vector comprises the peptide MPG, the
30 amphipatic sequence of peptide MPG or an analog thereof.
14. The inhibitor of claim 11, wherein said peptide and said vector are in the form of a
complex.

15. The inhibitor of claim 11, wherein said peptide and said vector are linked by a covalent liaison.
16. The inhibitor of claim 1, wherein said inhibitor is formed by a peptide comprising peptide p7 and peptide MPG or the amphipatic sequence of peptide MPG.
- 5 17. The inhibitor of claim 16, wherein said inhibitor is peptide p7++, or an analog thereof.
18. A pharmaceutical composition comprising the inhibitor of HIV replication of claim 1 and a pharmaceutically acceptable excipient.
19. Use of the inhibitor of claim 1, or of the composition of claim 18, for the manufacture of a medicament to be used in the treatment of an HIV infected patient.
- 10 20. The use of claim 19, wherein said HIV is HIV-1 or HIV-2.
21. The use of claim 19, wherein said patient is infected by a multidrug-resistant HIV virus.
22. The use of claim 19, wherein the medicament is used simultaneously or in combination with one or more other anti-HIV medicament(s).
- 15 23. A method for treating or inhibiting an HIV infection comprising administering to a human in need thereof a therapeutically effective amount of the inhibitor of claim 1.
24. The method of claim 23, wherein said HIV is HIV-1 or HIV-2.
25. The method of claim 23, wherein said HIV is a multidrug-resistant HIV.
26. The method of claim 23, wherein said inhibitor is administered in combination with a therapeutically effective amount of one or more other anti-HIV medicament(s).
- 20 27. A method for treating or inhibiting an HIV infection comprising administering to a human in need thereof a therapeutically effective amount of the composition of claim 18.
28. The method of claim 27, wherein said HIV is HIV-1 or HIV-2.
29. The method of claim 27, wherein said HIV is a multidrug-resistant HIV.
- 25 30. The method of claim 27, wherein said composition is administered in combination with a therapeutically effective amount of one or more other anti-HIV medicament(s).

